

- sub B2
- AI
1. {ONCE AMENDED} An optical device for emitting a laser light beam, comprising:  
a source of a laser light beam including a package and means for generating the laser light beam housed within the package, the package being provided with a laser light beam emission window; a diaphragm which selects a central portion of the laser light beam; wherein the package comprises the diaphragm.
  2. {ONCE AMENDED} The device according to claim 1, wherein the source comprises a semiconductor laser diode.
  3. {ONCE AMENDED} The device according to claim 1, wherein said diaphragm is directly associated to said package at said laser light beam emission window.
  4. {ONCE AMENDED} The device according to claim 3, wherein said diaphragm is directly housed in the laser light beam emission window.
  5. {ONCE AMENDED} The device according to claim 1, wherein said laser light beam emission window is shaped to serve as the diaphragm.
  6. {ONCE AMENDED} The device according to claim 1, wherein a size of the laser light beam emission window is smaller than a size of the laser light beam in a transversal cross section taken at said laser light beam emission window.
  7. {ONCE AMENDED} The device according to claim 6, wherein the laser light beam emission window defines an aperture having a Fresnel number smaller than 2 along a predetermined reading direction.
  8. {ONCE AMENDED} The device according to claim 7, wherein said aperture has a Fresnel number smaller than 1.2 along said reading direction.

9. {ONCE AMENDED} The device according to claim 7, wherein said aperture has a Fresnel number smaller than 2 along an orthogonal direction with respect to said reading direction.

10. {ONCE AMENDED} The device according to claim 1, further comprising a focusing lens.

11. {ONCE AMENDED} The device according to claim 10, wherein the focusing lens is directly associated to said package at said laser light beam emission window.

12. {ONCE AMENDED} The device according to claim 11, further comprising an adhesive interposed between the focusing lens and the laser light beam emission window.

13. {ONCE AMENDED} The device according to claim 11, wherein the focusing lens is housed in the laser light beam emission window and serves as the diaphragm.

14. {ONCE AMENDED} The device according to claim 13, wherein the focusing lens is one of a Fresnel and a diffractive lens.

15. {ONCE AMENDED} The device according to claim 1, wherein said package exhibits a longitudinal axis Z and wherein the source is arranged in said package so that the emitted light beam propagates along a substantially perpendicular direction with respect to said longitudinal axis Z.

16. {ONCE AMENDED} An optical reader, comprising:  
a laser light beam emission device for illuminating an optical code,  
means for generating at least one scan of said optical code,  
photo-detecting means which collects a luminous signal diffused by the illuminated optical code and generates an electrical signal proportional thereto, and  
processing means for processing the electrical signal,

wherein the laser light beam emission device comprises:

a source of a laser light beam including a package and means for generating the laser light beam housed within the package; the package being provided with a laser light beam emission window;

a diaphragm which selects a central portion of the laser light beam;

wherein the package comprises the diaphragm.

17. {ONCE AMENDED} A package for a light beam emission source, the package comprising:

means for generating a light beam housed in a cavity of the package,  
a wall provided with a window which allows emission of the light beam, and  
a diaphragm intended to select a central portion of the light beam.

18. {ONCE AMENDED} An optical device for emitting/detecting a luminous signal, comprising:

a source of a light beam including a package and means for generating the light beam housed in a first portion of the package, a light beam emission window being formed in the first portion of the package;

photo-receiving means which detects a luminous signal diffused by an optical code illuminated by the source, the photo-receiving means being housed in a second portion of the package, the second portion of the package being optically separate with respect to the first portion, the second portion of the package being provided with a window for collecting the luminous signal diffused by the illuminated optical code.

19. {ONCE AMENDED} The device according to claim 18, wherein the emission source comprises a semiconductor laser diode.

20. {ONCE AMENDED} The device according to claim 18, wherein said emission window and the collecting window are formed on respective first and second walls of said package, the first and second walls being orthogonally oriented with respect to one another.

21. {ONCE AMENDED} The device according to claim 18, further comprising at least one diaphragm intended to select a central portion of the light beam.

22. {ONCE AMENDED} The device according to claim 21, wherein said diaphragm is directly associated to said package at said light beam emission window.

23. {ONCE AMENDED} The device according to claim 22, wherein said diaphragm is directly housed in the light beam emission window.

24. {ONCE AMENDED} The device according to claim 22, wherein said light beam emission window is shaped to serve as said diaphragm.

25. {ONCE AMENDED} The device according to claim 18, wherein a size of the light beam emission window is smaller than a size of the light beam in a transversal cross section taken at said light beam emission window.

26. {ONCE AMENDED} The device according to claim 25, wherein the emission window defines an aperture having a Fresnel number smaller than 2 along a predetermined reading direction.

27. {ONCE AMENDED} The device according to claim 26, wherein said aperture has a Fresnel number smaller than 1.2 along said reading direction.

28. {ONCE AMENDED} The device according to claim 26, wherein said aperture has a Fresnel number smaller than 2 along an orthogonal direction with respect to said reading direction.

29. {ONCE AMENDED} The device according to claim 18, also comprising a focusing lens.

30. {ONCE AMENDED} The device according to claim 29, wherein the focusing lens is directly associated to said package at said light beam emission window.

31. {ONCE AMENDED} The device according to claim 30, further comprising an adhesive interposed between the focusing lens and the light beam emission window.

32. {ONCE AMENDED} The device according to claim 30, wherein the focusing lens is housed in the light beam emission window and serves as the said diaphragm.

33. {ONCE AMENDED} The device according to claim 32, wherein the focusing lens is one of a Fresnel and a diffractive lens.

34. {ONCE AMENDED} The device according to claim 18, further comprising a wall made of an optically opaque material interposed between said first portion of the package and the second portion of the package.

35. {ONCE AMENDED} An optical reader comprising:  
a light beam emission device which generates a light beam for illuminating an optical code,  
means for generating a scan of the optical code,  
a device for detecting the luminous signal diffused by the illuminated optical code and for generating an electrical signal proportional thereto,  
means for processing the electrical signal,  
wherein the emission device and the detection device are integrated in a single